

# A study on the genus *Meleonoma* Meyrick from China, with descriptions of two new species

## (Lepidoptera: Cosmopterigidae)

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**Abstract:** Two new species of the genus *Meleonoma* Meyrick from China, *M. facialis* sp. nov. and *M. malacognatha* sp. nov., are described, with their genital structures in both sexes illustrated. A key to the Chinese species of the genus is given.

**Key words:** Lepidoptera; Cosmopterigidae; *Meleonoma*; new species; China

*Meleonoma* Meyrick is a small genus established in 1914. It was originally placed in the family Oecophoridae, but later transferred to Cosmopterigidae. Gaede (1939) listed eleven species of the genus in the catalogue of Oecophoridae. Among them, three species were reported from Australia (Nielsen *et al.*, 1996), which were later transferred to other genera of Oecophoridae and Cosmopterigidae; two species were described from India and Sri Lanka respectively; Madagascar, China, Sikkim and Borneo each had one species reported (Meyrick, 1922, 1914~1936; Clarke, 1963). In 1955, another species was recognized from Madagascar. Clarke (1965) transferred *Pseudodoxia crocomitra* Meyrick to *Meleonoma*. In total, ten species of the genus *Meleonoma* Meyrick had been recorded in the world. The present paper describes two new species of the genus from China, with a key to the three Chinese species given.

The type specimens are kept in the Department of Biology, Nankai University, Tianjin.

### *Meleonoma* Meyrick, 1914

*Meleonoma* Meyrick, 1914. *Exotic Microlepidoptera*, 1: 255.

Type species: *Cryptolechia stomota* Meyrick, 1910.

### Key to the Chinese species of the genus *Meleonoma* Meyrick

1. Forewing with small black dot at cell and fold respectively, ventral margin of valva without process in male genitalia ..... 2  
Forewing with large black blotches, but without distinct dots at cell and fold; ventral margin of valva with a large process in male genitalia ..... *M. pardalias* Meyrick
2. Uncus long and distally pointed, aedeagus without cornutus in male genitalia; signum absent in female genitalia .....  
..... *M. malacognatha* sp. nov.  
Uncus short and distally rounded, aedeagus with a small cornutus in male genitalia; signum spine-like, with small teeth in female genitalia ..... *M. facialis* sp. nov.

### *Meleonoma pardalias* Meyrick, 1931

*Meleonoma pardalias* Meyrick, 1931, *Exotic Microlepidoptera*, 4: 191.

Distribution: China (Sichuan).

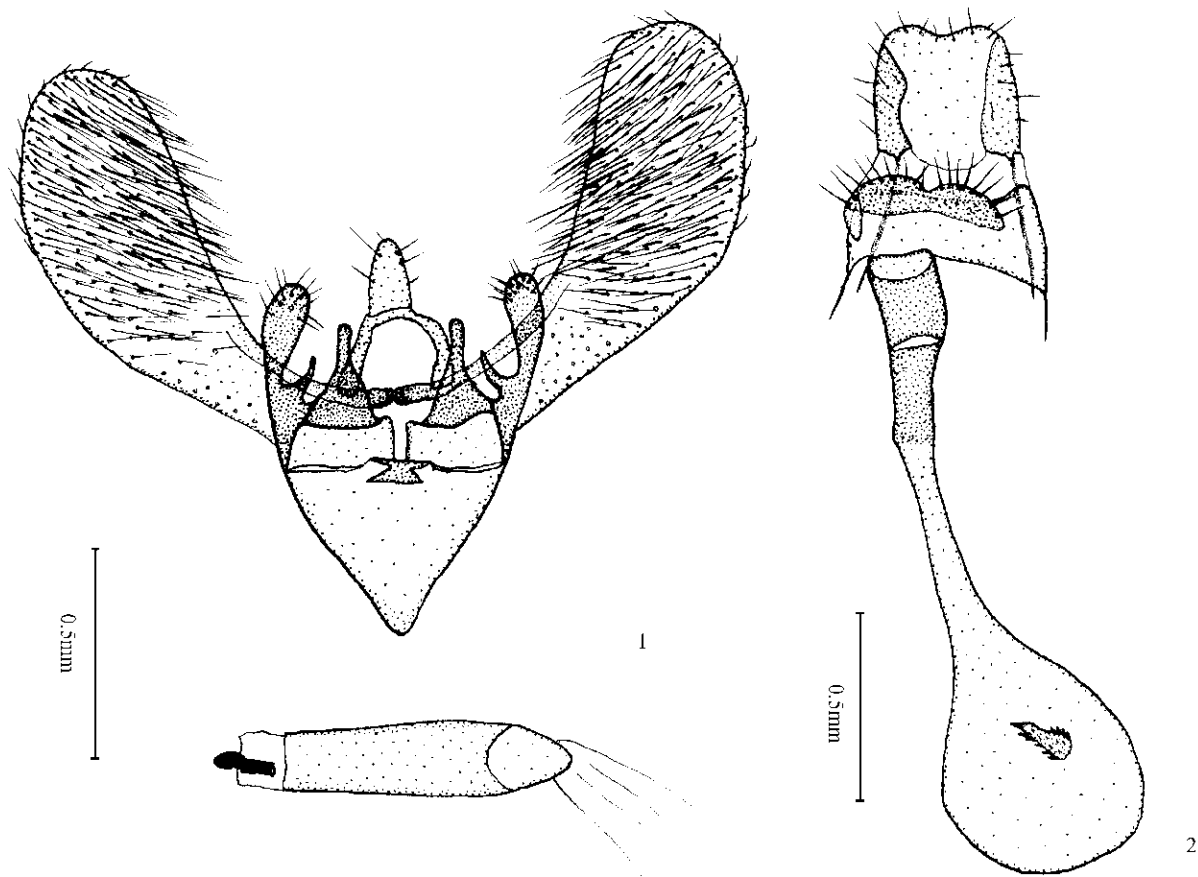
### *Meleonoma facialis* Li et Wang, sp. nov. (Figs. 1~2)

Wing expanse 10.0~10.5 mm. Body light yellowish. Head with appressed scales. Antenna ringed pale brown. Labial palpus extraordinarily long; second segment longer than third; third segment thin, pointed apically. Forewing with scattered black scales, black scales becoming denser at apex, forming irregular obscure blotch; costa with indistinct black spot at middle; small black dot set at middle of cell and 2/3 of fold respective-

ly; cilia in same colour as forewing. Hindwing and cilia greyish white. Legs yellowish white, fore and mid tibiae and tarsi brown, with pale spots; mid tibia and tarsus tinged brown scales.

Male genitalia (Fig. 1): Uncus membranous, somewhat conically shaped. Valva narrow at base, apical portion expanded, long elliptical, densely haired, apex rounded; transtilla developed and sclerotized, distally

rounded. Sacculus developed, heavily sclerotized, with three processes: outer process longest, somewhat elliptical, setose; inner process subtriangular in shape, wide at base, thinned distally, apex bluntly rounded; middle process small spine-like. Saccus large, triangle in shape, apex roundly pointed. Aedeagus relatively short, straight, with one short but sclerotized cornutus in vesica.



Figs. 1~2 *Meleonoma facialis* Li *et* Wang, sp. nov. 面模尖蛾, 新种  
1. male genitalia (雄性外生殖器); 2. female genitalia (雌性外生殖器)

Female genitalia (Fig. 2): Papillae anale large and broad, setose. Posterior apophyses 2.5 times as long as anterior apophyses. Lamella postvaginalis sclerotized, with warts, somewhat concaved at middle, a line of setae set on posterior margin. Basal half of ductus bursae sclerotized, distal half membranous. Corpus bursae membranous, irregularly rounded. Signum spine-like, with small teeth.

Holotype ♂, Chengcheng County (35.1°N, 109.9°E), Shaanxi Province, 1 000 m, Aug. 9, 1993, collected by LI Hou-Hun. Paratypes: 6 ♂♂, 2 ♀♀, same data as holotype; 1 ♂, Ningshan County (33.3°N,

108.3°E), Shaanxi Province, July 1, 1990, collected by LI Jin-Fu; 1 ♂, Mt. Wuyishan (26.4°N, 116.4°E), Jiangxi Province, 820 m, July 30, 1980; 1 ♂, Nanchang (28.6°N, 115.9°E), Jiangxi Province, Aug. 8, 1978; 1 ♂, Luxian (28.9°N, 105.4°E), Sichuan Province, July 27, 1995, collected by ZENG Yong-Xing; 1 ♂, Mt. Jigongshan (31.8°N, 114.1°E), Henan Province, 700 m, July 9, 1997, collected by LI Hou-Hun and WANG Shu-Xia; 1 ♂, Mengla (21.4°N, 101.5°E), Yunnan Province, 630 m, Nov. 21, 1987, collected by LI Hou-Hun.

This new species is similar to *M. aridula* Meyrick,

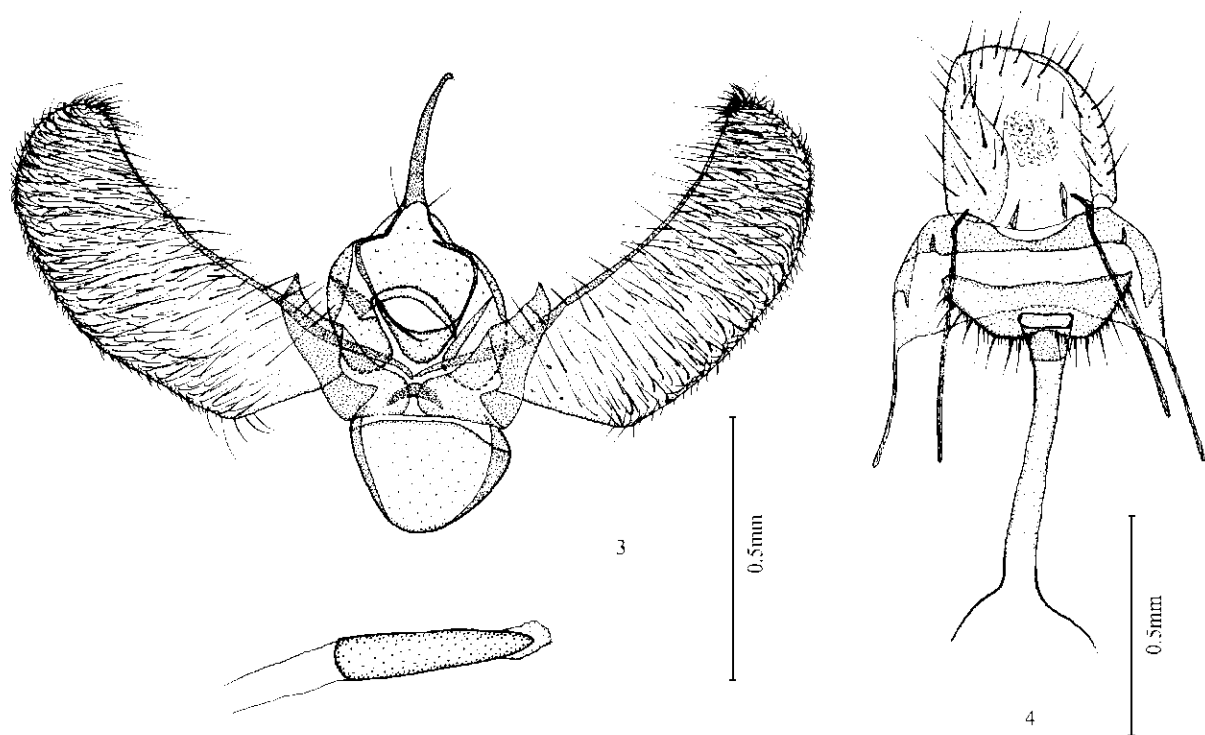
but can be distinguished from the latter by the following characters: forewing with only one spot at costa; in male genitalia uncus bluntly rounded at apex, sacculus with three processes, and cornutus short and heavily sclerotized.

***Meleonoma malacognatha* Li et Wang, sp. nov.**  
(Figs. 3~4)

Wing expanse 12.5 mm. Head pale yellow, with brown scales laterally. Antenna with scape brown on dorsal surface, light yellow on ventral surface; flagellum alternately yellow and brown. Labial palpus light yellow, dotted with brown scales; second segment long and thick; third segment about 1/2 as long as second, pointed distally. Thorax, tegula and forewing yellow or lutescent, somewhat ochreous, densely with black scales. Forewing with small black dot at middle of cell and middle of fold

respectively; distal half of costa with a few dim black dots; apex almost black due to dense black scales; cilia yellowish brown, mixed with dark brown. Hindwing and cilia dark grey. Fore and mid legs black, with light yellow spots. Hind leg light yellow, tarsus pale brown, with greyish white spots.

Male genitalia (Fig. 3): Uncus slender, apically pointed. Gnathos somewhat membranous, lateral arms long, anteriorly rounded. Valva large and broad, dorsal margin and ventral margin nearly parallel except for base greatly narrowed, densely with dense long hairs. Costa with sclerotized edge. Transtilla long and thin, sclerotized, distally pointed. Sacculus short, heavily sclerotized, apex pointed. Saccus large and broad, bluntly rounded on anterior margin. Aedeagus small and short, straight, distal portion cone-like in shape, weakly sclerotized, without cornutus.



Figs. 3~4 *Meleonoma malacognatha* Li et Wang, sp. nov. 软颚模尖蛾, 新种  
3. male genitalia (雄性外生殖器); 4. female genitalia (雌性外生殖器)

Female genitalia (Fig. 4): Papillae anale large and broad, setose. Posterior apophyses twice as long as anterior apophyses. Lamella postvaginalis sclerotized, posteriorly with setae, somewhat concaved at middle. Ductus bursae membranous, sclerotized basally. Corpus bursae membranous, without signum.

Holotype ♂, Fengxian (33.9° N, 106.5° E), Shaanxi Province, 600 m, July 11, 1988, collected by LI Hou-Hun. Paratypes: 2 ♂♂, 2 ♀♀, July 9~14, 1988, other data same as holotype; 1 ♂, Zhouzhi (34.1°N, 108.2°E), Shaanxi Province, 1350 m, July 14, 1987, collected by LI Hou-Hun.

This new species is closely allied to *M. stomata* Meyrick, but can be separated from the latter by: forewing without large black blotch at middle of costa; in male genitalia gnathos membranous, valva with dorsal margin and ventral margin nearly parallel except for base greatly narrowed, transtilla pointed distally, aedeagus without cornutus.

References

Clarke J F G, 1963. Catalogue of the Type Specimens of Microlepidoptera in

the British Museum (Natural History) described by Edward Meyrick. Vol. 4. London: The British Museum (Natural History), 1–521.  
Clarke J F G, 1965. Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick. Vol. 5. London: The British Museum (Natural History), 1–581.  
Gaede M, 1939. Oecophoridae. *Lepidopterorum Catalogus*, 92: 209–476.  
Meyrick E, 1922. Oecophoridae. *Genera Insectorum*, 180: 1–244.  
Meyrick E, 1912-1936. Exotic Microlepidoptera. Vols. 1–4. [Reprint. London: Classey E W, 1969, 1–2547]  
Nielsen E S, Edwards E D, Rangsi T V, 1996. Monographs on Australian Lepidoptera. Vol. 4. Collingwood: CSIRO, 1–529.

中国模尖蛾属研究及二新种记述  
(鳞翅目：尖蛾科)

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摘要：研究了中国模尖蛾属 *Meleonoma* Meyrick，其中记述 2 新种：面模尖蛾 *M. facialis* Li *et* Wang, sp. nov. 和软颚模尖蛾 *M. malacognatha* Li *et* Wang, sp. nov.。绘制了雌雄外生殖器特征图，给出了中国模尖蛾属分种检索表。模式标本保存在南开大学生物系标本室。

关键词：鳞翅目；尖蛾科；模尖蛾属；新种；中国

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新种简记

面模尖蛾，新种 *Meleonoma facialis* Li *et* Wang, sp. nov. (图 1~2)

正模♂，陕西澄城，1 000 m，1993-VIII-9，李后魂采。副模：6 ♂♂，2 ♀♀，采集资料同正模；1 ♂，陕西宁陕火地塘，1990-VII-1，李金福采；1 ♂，江西武夷山，820 m，1980-VII-30；1 ♂，江西南昌，1978-VIII-8；1 ♂，四川泸县海潮，1995-VII-27，曾永兴采；1 ♂，河南信阳鸡公山，700 m，1997-VII-9，李后魂、王淑霞采；1 ♂，云南勐腊，1987-XI-21，李后魂采。

本新种与 *M. aridula* Meyrick 相似，但前翅前缘仅有一个斑点；雄性外生殖器爪形突末端钝圆，抱器腹端部有三个突起，角状器短，强烈骨化。

软颚模尖蛾，新种 *Meleonoma malacognatha* Li *et* Wang, sp. nov. (图 3~4)

正模♂，陕西凤县辛家山，1 600 m，1988-VII-11，李后魂采。副模：2 ♂♂，2 ♀♀，1988-VII-9~14，其它资料同正模；1 ♂，陕西周至，1 350 m，1987-VII-14，李后魂采。

本种与 *M. stomata* Meyrick 相似，但前翅前缘中部无黑斑；雄性外生殖器颚形突膜质；抱器瓣背缘和腹缘除基部外几乎平行，抱器背基突端部尖；阳茎无角状器。